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ABSTRACT

A telephone survey in Los Angeles County examined patterns of visitation to undeveloped natural areas by various segments of the population and perceived barriers to such visits. A total of 894 interviews were completed; the sample was representative of Los Angeles County's racial and ethnic diversity. About 40 percent of respondents had visited a natural area during the previous spring or summer. Logistic regression results showed that the following groups were significantly less likely than their counterparts to visit an undeveloped natural area: those with low socioeconomic status, noncitizens, African Americans, and those feeling unwelcome due to perceived discrimination. Groups that underutilized natural areas cited six important barriers to visitation, for which management agencies and outdoor experiential educators could realistically develop interventions. These barriers were: (1) lack of friends to recreate with in natural areas; (2) too crowded at natural areas; (3) lack of workers of same ethnicity; (4) feeling unwelcome and discriminated against; (5) don't know where to go or what to do; and (6) lack of transportation. Contains 32 references and 4 data tables. (SV)

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# WHO IS LEAST LIKELY TO VISIT NATURAL AREAS AND PARTICIPATE IN OUTDOOR EXPERIENTIAL EDUCATION PROGRAMS; WHAT ARE THE BARRIERS; AND HOW CAN BARRIERS BE BROKEN?

Patrick T. Tierney Ph.D. and Rene Dahl Ph.D.

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# Who Is Least Likely To Visit Natural Areas And Participate In Outdoor Experiential Education Programs; What Are The Barriers; And How Can Barriers Be Broken?

Patrick T. Tierney Ph.D. and Rene Dahl Ph.D.

Recent studies (Floyd, Gramann and Saenz 1993; Dwyer 1994; Tierney, Dahl and Chavez, 1998) have found significant differences in visitation to natural areas and participation in outdoor recreation activities among segments of the American public. Who is least likely to visit parks and outdoor recreation sites, or participate in programs? Does visitation vary by ethnic and socio-economic group? Why are some less likely to participate and what are the most important constraints? These are already important questions to not only protected area managers, but to non-profit and commercial organizations that provide outdoor experiential education (EE) programs, often in natural area settings.

Future trends suggest that we will need to pay even more attention to these issues. The U.S. Census Bureau projects that over half of the nation's population will be "of color" by the year 2050 (McLeod 1993). There is a distinct possibility that significant changes will occur in current natural area recreation use patterns and participation in outdoor experiential education programs. Barriers identified by current users and non-users, especially urban "minority" residents, help natural area and EE managers adapt current practices and develop unique programs and delivery systems to serve the growing ethnic population.

The study described in this monograph was based on a telephone survey of a stratified random sample Los Angeles City and County adult residents between November, 1994 and January, 1995. Los Angeles County, with a 1990 population of over 8,863,164 residents, was selected because it is the source area for many visitors to parks and experiential education programs, because of its proximity to several nearby national forests and other large undeveloped natural areas, and because of the great ethnic diversity of its population. Caution should be used in extending results from this Los Angeles sample to other parts of the country. Sampling of a source area, instead of interviewing at a park site, was selected because we wanted to learn about both *users* and *non-users* of undeveloped natural areas. Interviews were available in English, Spanish and Mandarin.

Respondents were asked if they took a recreational or leisure trip away from their home from May through August, 1994. If they took a trip, respondents were asked if they visited an "undeveloped natural" area. An undeveloped natural area was described to respondents by the following statements. "We are ***not*** interested in trips to a city where there were highly developed recreation sites, such as city parks and beaches, zoos, festivals and theme parks. We are interested in trips to areas located outside cities where you visited undeveloped natural areas, such as national and state forests, open space areas, protected areas or nature preserves. These areas could have campgrounds, lakes, access roads, visitors centers and trails." The intent was to allow for a relatively broad definition of what constituted an undeveloped natural area (NA).

This approach allowed us to gather data from three key groups: 1) Persons who **did not take any leisure trip** during the summer; 2) persons who **traveled but did not visit an undeveloped natural area** in the summer; 3) persons who **visited an undeveloped natural area** on a vacation or shorter excursion.

Each of the three groups described above was asked to identify barriers or constraints to visitation. A consistent set of 18 barriers statements, developed from past research (Norman 1991; Tierney 1992) and the pre-test, was asked of each group.

**Results**

A total of 3,098 calls were attempted with a total of 894 interviews were completed. Despite this lower than anticipated response rate the survey is still considered an accurate representation of the overall Los Angeles area because of its large sample size. To check for non-response bias, demographic characteristics of survey respondents were compared with those for the 1990 U.S. Census for Los Angeles County, which showed that the sample is reasonably representative of the county population.

The survey sample was very diverse, with 31.8% identified themselves as primarily Mexican American, Hispanic, Chicano, Latino or Spanish decent; 31.1% were White or European American; 20.6% were Black or African American; 16.5% Asian or Pacific Islander; 0.7% were other ethnic groups and 1.7% were a mixture of ethnic groups.

About one in three survey respondents did not take any leisure trip during the late spring and summer of 1994, suggesting a substantial number of residents have significant barriers to travel or have limited interest in leisure travel. About four out of ten residents of Los Angeles County took a trip in which they visited an undeveloped natural area. The remainder (30.5%) took a leisure trip but did not visit an undeveloped natural area.

Visitors to natural areas were relatively evenly distributed among age groups. However, there were significant differences in visitation to natural areas according to education and income levels, with 55% of respondents from households earning $75,000 or more visiting a NA, compared to 17.1% of those from households earning under $25,000. There was little difference in NA visitation between males and females. U.S. citizens were more likely to visit a NA (35.9%), compared to non-citizens (24.6%).

There were significant with-in group differences in visitation to a NA. African Americans much more likely to visit a NA were young males with high education and high income. Hispanic and Asian Americans who most frequently visited a NA were U.S. citizens, with high education and income levels. However, Asian females were more likely to take a leisure trip, compared to males. European Americans much more likely to visit a NA were young persons with

moderate to high income levels.

The survey asked respondents to agree/disagree with 18 statements describing barriers which may have affected their travel to natural areas. The importance of each barrier is broken down into three types of travelers identified earlier in this study; respondents who did not take a leisure trip away from home, persons who traveled but did not visit a natural area, and respondents who visited a natural area. The most constraining barriers for all three groups were

- lack of free time
- few friends travel or recreate in (natural) area
- nearby destinations were too crowded
- their financial situation
- don't know where to go/what to do

There were significant differences in barriers between those who did not take a leisure trip, those who visited a NA and those who took a trip but did not visit a NA. *Time commitments, financial constraints* and *not enough workers of my ethnicity* were significantly more important to respondents who did not take a leisure trip, compared to those who took a leisure trip. There were also significant differences between respondents who visited and did not visit a NA in terms of *perceived discrimination* and *feeling welcome traveling enroute or within a NA*. "Minority" ethnic groups were more likely to express the belief that not feeling welcome was an issue, than their European American counterparts.

Respondents who took a vacation during the study period chose one of 16 statements describing potential reasons why they decided to take a vacation. The top five motives for respondents who took a vacation were *escape from daily routine, viewing scenery, being with family or friends, seeing something different,* and *going to a safe area.* Significant differences in motive for vacationing in a NA versus taking a vacation that did not visit a NA were *viewing scenery, experiencing quiet, getting exercise, developing spiritual values* and *(not) maintaining cultural roots*. There were significant differences in the importance of motives between the four ethnic groups.

The final objective of the research was to develop and test a model of outdoor recreation participation in undeveloped natural areas incorporating the variables of socio-economic status, ethnicity, assimilation, and perceived discrimination. Logistic regression results showed that respondents significantly less likely to visit an undeveloped natural area were those with low levels of socio-economic status, low levels of assimilation, who had moderate to high perceived discrimination, and who were of African American ethnicity. There were no significant differences between Asian, Hispanic and European Americans in their probability of visiting a NA, once intervening variables were held constant. In other words, Hispanic, Asian and European Americans were equally likely to visit natural areas, and possibly participate in EE programs, once differences in education, income and feeling welcome are eliminated.

We have identified several sub-groups within Los Angeles county that are substantially under-utilizing undeveloped natural areas (less than 25% visited) and could have special efforts made to encourage participation: African Americans in general, but especially females and those with lower education level; younger Hispanic respondents and those who are not U.S. citizens and have lower income and education levels; and Asians with low income. Sub-groups with the highest levels of visitation to undeveloped natural areas (more than 45% visited) were European Americans in general, especially young adults, males, and those with high income levels; Asian citizens in general and those with high income; and Hispanic Americans with high education and income levels.

There appears to be six important barriers to natural area visitation cited by groups that under-utilized wildlands, for which management agencies and EE providers could realistically develop intervention strategies. The most critical and workable barriers include: 1) Lack of friends to recreate with in natural areas; 2) Too crowded at natural areas; 3) Want more workers of my ethnicity; 4) Feel unwelcome and discriminated against; 5) Don't know where to go or what to do; and 6) Lack transportation options. Many possible alternative strategies for reducing these barriers could be developed, and local professionals are already working on some of these.

Data from the Los Angeles research and our panelist experiences suggest that public agencies that manage wildland resources and organizations that provide EE programs must be proactive by creating new programs and expanding existing intervention projects which encourage participation. Better communication and promotion to residents about the opportunities and benefits of outdoor recreation and EE programs in undeveloped natural areas is needed, or land management and EE program providers risk missing unique business opportunities and societal responsibilities to serve growing, and increasingly ethnic, urban populations.

*(References are given in Appendix D.)*

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# APPENDIX D

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**Table 1**. Educational and Household Income Characterisitics of Survey Respondents and 1990 Los Angeles County U.S. Census Data (Percent)

| | Black | | Hispanic | | Asian | | White | |
|---|---|---|---|---|---|---|---|---|
| | Resp. | LA | Resp. | LA | Resp. | LA | Resp. | LA |
| **Education Level** | | | | | | | | |
| Some High School or Less | 8.3 | 11 | 27.5 | 60 | 6.2 | 26 | 3.7 | 23 |
| High School Graduate | 29.0 | 29 | 31.2 | 17 | 18.7 | 22 | 19.4 | 22 |
| Some College | 31.8 | 31 | 17.0 | 11 | 20.7 | 21 | 32.2 | 22 |
| College Graduate | 20.1 | 23 | 12.3 | 9 | 37.2 | 17 | 27.1 | 23 |
| Graduate or Prof. Degree | 7.3 | 6 | 2.5 | 2 | 11.7 | 14 | 10.6 | 10 |
| **Age** | | | | | | | | |
| 18-34 years | 44.7 | 43 | 62.3 | 51 | 53.8 | 42 | 35.9 | 38 |
| 35-44 | 26.3 | 21 | 20.7 | 23 | 22.8 | 24 | 24.9 | 20 |
| 45-55 | 10.1 | 15 | 8.7 | 12 | 11.7 | 24 | 15.4 | 14 |
| 55 and older | 18.4 | 22 | 8.0 | 14 | 11.0 | 20 | 23.8 | 28 |
| **Income Level** | | | | | | | | |
| Under $25,000 | 31.3 | 48 | 53.3 | 44 | 29.0 | 32 | 15.0 | 32 |
| $25,000-49,999 | 39.1 | 30 | 26.8 | 23 | 29.7 | 31 | 34.1 | 32 |
| $50,000-74,999 | 16.8 | 14 | 8.3 | 16 | 17.2 | 20 | 22.3 | 19 |
| $75,000-99,999 | 3.9 | 5 | 3.6 | 5 | 4.8 | 9 | 12.1 | 9 |
| Over $100,000 | 5.0 | 3 | 1.4 | 3 | 6.2 | 8 | 9.5 | 10 |

Resp. - Survey respondents
LA - Adult (18+ years) residents of Los Angeles County. Source: 1990 Census of Population, Los Angeles County, U.S. Bureau of the Census, 1993.

**Table 2**
**BARRIERS TO TAKING A TRIP, VISITING NATURAL AREA, AND LIMITING STAY WITHIN NATURAL AREA**
(PERCENT WHO AGREE OR STRONGLY AGREE)

| BARRIER | BARRIER TO TAKING A TRIP (n=412) | BARRIER TO VISITING NAT. AREA (n=193) | BARRIER LIMITING N.A. STAY (n=289) |
|---|---|---|---|
| Time commitments | 59.1% | 41.6% | 45.1% |
| Financial situation was a constraint | 54.4 | 27.3 | 29.7 |
| Few of my friends travel or recreate in (natural) areas | 49.2 | 45.6 | 46.4 |
| Nearby destinations are too crowded | 44.0 | 47.4 | 37.4 |
| Would travel/rec (in NA) if more workers of my ethnicity were employed there | 42.1 | 26.8 | 39.0 |
| Don't know where to go/what to do | 40.3 | 31.6 | 43.4 |
| Normally travel/rec, but did something different this summer | 36.2 | 46.7 | NA |
| Lacked transportation | 34.8 | 14.8 | 23.6 |
| Want more luxury accommodations | 33.7 | 22.5 | 48.4 |
| No Companions to go with | 27.2 | 16.7 | 27.5 |
| Not safe | 25.6% | 16.3% | 23.6 |
| People of my ethnicity are discriminated against traveling/or rec. (in NA) | 22.8 | 14.4 | 10.4 |
| No nearby (natural) areas | 22.0 | 21.5 | 30.8 |
| Travel/rec (in NA) is too much trouble | 21.4 | 10.0 | 19.8 |
| Outdoors are uncomfortable | 19.0 | 12.4 | 23.1 |
| Don't feel welcome traveling (or in NA) | 18.7 | 12.9 | 15.4 |
| No interest in vacations | 15.3 | 14.3 | NA |
| Not healthy enough | 12.7 | 4.8 | 11.5 |

* Barrier To Taking A Trip based on respondents who did not take a leisure trip. Barrier to Visiting Natural Area based on respondents who took trip but did not visit natural area. Barrier Limiting Natural Area Stay based on respondents who visited an undeveloped natural area.
** Scale is 1 - strongly agree to 5 - strongly disagree.
Number shown is percent of respondents who agree or strongly agree with statement.

**Table 3**
**RESPONDENT MOTIVES FOR VACATIONING IN NATURAL AREAS**

| MOTIVE | NO N.A. VACATION (n=209) Percent | Mean | VACATION IN N.A.. (n=182) Percent | Mean | F PROB. (1) |
|---|---|---|---|---|---|
| Escape from daily routine | 74.2 | 1.95 | 80.9 | 1.74 | .072 |
| Viewing scenery | 59.9 | 2.33 | 82.3 | 1.74 | .000 |
| Being with my family | 70.9 | 2.02 | 72.3 | 2.03 | .936 |
| Seeing something different | 64.3 | 2.24 | 71.3 | 2.04 | .093 |
| Going to a safe area | 66.5 | 2.20 | 66.0 | 2.24 | .719 |
| Being with friends | 67.6 | 2.15 | 59.8 | 2.35 | .126 |
| Physically resting | 59.3 | 2.30 | 67.0 | 2.25 | .724 |
| Experiencing quiet | 53.3 | 2.48 | 66.0 | 2.10 | .001 |
| Getting exercise | 48.3 | 2.75 | 62.2 | 2.26 | .000 |
| Learning about new culture or area | 45.6 | 2.73 | 49.7 | 2.65 | .540 |
| Develop spiritual values | 46.2 | 2.88 | 52.6 | 2.58 | .039 |
| Develop new skills | 43.3 | 3.04 | 41.2 | 2.90 | .316 |
| Teach others | 36.2 | 3.12 | 40.6 | 3.00 | .418 |
| Maintain ties with cultural roots | 44.5 | 2.91 | 29.7 | 3.42 | .000 |
| Challenging yourself | 31.8 | 3.39 | 36.9 | 3.18 | .159 |
| Meeting new people | 37.3 | 3.12 | 25.5 | 3.45 | .021 |

Scale is 1 - extremely important to 5 - not at all important. Percent refers to percent of respondents who stated it was extremely or very important. Mean refers to group means.

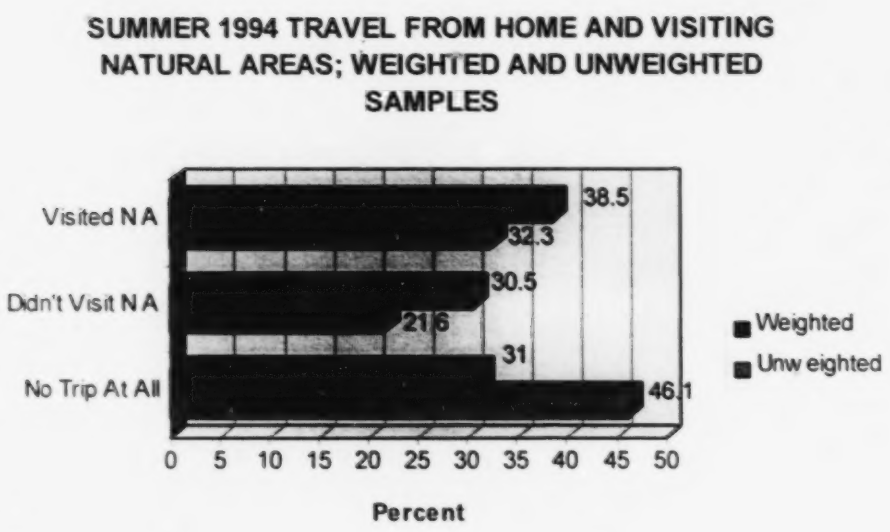
/ The F Probability that differences between the groups are due to chance. Statistics were derived from One-Way Analysis of Variance.

**Table 4**
**LOGISITIC REGRESSION INDEPENDENT VARIABLE RESULTS**

| Independent Variable | Slope Coefficient | S.E. | Significance | Odds Ratio |
|---|---|---|---|---|
| SOCIO-ECONOMIC STATUS | | | | |
| Household Income | | | | |
| Under $24,999 (Ref. Group) | NA | NA | NA | 1.000 |
| $25,000-49,999 | .6241 | .2213 | .0048 | 1.866 |
| $50,000 or more | 1.052 | .2373 | .0000 | 2.864 |
| Education | | | | |
| Some High Sch.(Ref. Group) | NA | NA | NA | 1.000 |
| High/Trade School Graduate | .7475 | .3572 | .0362 | 2.113 |
| Some or College Graduate | 1.045 | .3529 | .0030 | 2.845 |
| Professional/Graduate Sch. | 1.344 | .4079 | .0010 | 3.837 |
| PERCEIVED DISCRIMINATION | | | | |
| High & Moderate | -.414 | .1982 | .0366 | .6608 |
| Low (Reference Group) | NA | NA | NA | 1.000 |
| ASSIMILATION | | | | |
| U.S. Citizenship | | | | |
| Not U.S. Citizen | -.3533 | .2200 | .1083 | .7024 |
| U.S. Citizen (Ref. Group) | NA | NA | NA | 1.000 |
| ETHNICITY | | | | |
| African American | -.8261 | .2494 | .0009 | .4378 |
| Asian American | -.0157 | .2663 | .9531 | .9844 |
| Hispanic American | .1311 | .2268 | .5626 | 1.140 |
| European American (Ref. Group) | NA | NA | NA | 1.000 |
| CONSTANT (Derived) | -1.538 | .4863 | .0016 | NA |

N=894.
NA - Reference groups are not directly entered into the regression model, therefore no data are available for coefficient, S.E. or Significance. An odds ratio is not determined for theConstant.

Figure 1




1 To acquire an accurate estimate of the actual population characteristics of Los Angeles County residents it was necessary to adjust for the over-sampling of some ethnic groups and under sampling of others. Adjustments were made by weighting cases for analysis based on ethnicity. Weighting was accomplished by drawing a sub-sample (n=390) from the total data in proportion to the actual ethnic group population in the study area. Weighted data more closely represents the L.A. population characteristics.